SECTION – III

TECHNICAL SPECIFICATION & SCOPE OF WORK

3.01.00 GENERAL:

This section covers the technical specification of the equipments installed and their location and scope of work. This section shall be read in connection with Section-I General terms and condition and Section-II Project features and special terms and condition of the tender. The tenderer advised to visit the site/control centers and ascertain the working condition of the equipments.

3.02.00 SCOPE OF WORK:

a. The scope of contract shall be to keep the Toshiba make VRF HVAC units in normal working condition. Attending to all breakdown & preventive maintenance of different models of Toshiba make VRF HVAC units at BICC1 HSR Layout & BICC-2 Rajajinagar ,DAS BESCOM, Bengaluru offices without any delay.

b. Routine inspection and general checking of VRF HVAC units.

c. The contractor shall supply and install all parts found defective for satisfactory maintenance of Toshiba make VRF HVAC units without any delay during the contract period. The contractor shall note down the equipment's & accessories that are in service in present system.

d. Contract will be comprehensive in nature and maintenance and supply of spares, consumables and any component that is needed to keep system in healthy working condition is automatically covered in the scope of contract.

e. Compressors shall be replaced only when the existing compressor is found irreparable.

f. **Spares to be provided for maintaining continuity of work**: The successful service provider has to maintain ready stock of requisite spares in good condition throughout the comprehensive AMC period to facilitate immediate replacement of defective parts.

g. Bidder/contractor should maintain records of the services/replacement of preventive maintenance of breakdown maintenance carried out during the contract period.

h. **Preventive Maintenance for VRF HVAC Units:** Preventive Maintenance shall be provided once in 3 months during prime shift hours of coverage at no extra cost. The contractor shall monitor the performance of the systems, monitoring and cleaning, topping up of Refrigerant gas, repair or replacement of all electrical or mechanical running part found defective due to any wear and tear ,greasing of moving and running equipment's, Cleaning of filters etc., For AHU (Air Handling Unit): repairing of fan motor, belt, pulley, blower bearing,

shaft, AHU panel with breaker & VFD (Variable frequency drives), serving of strainer and AHU unit and **submit a service report along with invoices** to The General Manager(Ele.,),DAS,SG & TIC ,BESCOM,HSR Layout,Bengaluru-560102.

i. **Breakdown Maintenance for VRF HVAC Units:** The contractor should attend to all the breakdown call immediately & round the clock access to technical support on phone lines. However in extreme case, if the spares not available immediately, repair shall be carried out within 24 hours. Efforts shall be made to rectify the system within 24hours.During the contract period the firm shall supply and install all parts found defective for satisfactory maintenance of VRF HVAC units at no extra cost. It is the responsibility of the contractor to bring all components to working condition. Any leakage of gas in the piping/system shall be attended by the agency. Filling up of Refrigerant gas is also included in the scope of work. All repairs/rewinding/services related to the VRF HVAC units, Electrical circuits, compressors/motors/fans and all the accessories connected to VRF HVAC system etc., are covered under comprehensive AMC. All the spares and compressors are under the responsibility of the firm during contract period.

j. **Replacement of defective parts:** The firm /contractor shall supply and install all parts found defective during the Comprehensive AMC period in respect of VRF HVAC units at their own cost. Original spares and compressors shall be used during contract period. In case of suitable replacement not available for defective components of VRF HVAC units the firm/contractor shall undertake to provide a higher version components at no extra cost and the defective parts and components shall be handed over to DAS Section,BESCOM, Bengaluru.

k. Contract will be comprehensive in nature and maintenance and supply of spares, consumables and any component that is needed to keep system in healthy working condition is automatically covered in the scope of contract. Compressors shall be replaced only when the existing compressor is found irreparable.

l. In case the firm/contractor fails to bring the VRF HVAC units to working condition within 24hours from the date of intimation, a penalty at the rate of ½% per week subject to a maximum of 10% of the contract value during contract period will be levied and if maintenance of VRF HVAC units not carried out during the each quarter.

m. The list of works/supply mentioned above is only indicative and all other incidental works/supplies for successfully Comprehensive AMC are automatically covered in this scope of work. The complete work will be given on Comprehensive basis.

n. Necessary tools, tackles, lifting appliances, material handling equipment's scaffolds, cradles, safety nets ,equipment's ,labors, materials and testing

instruments necessary for Comprehensive AMC of VRF HVAC units are to be brought out by the contractor.

o. Services at the request of BESCOM as & when required.

3.02.00 Location and Specification of equipment's:
The different models of Toshiba make VRF HVAC units are installed at BICC-1,HSR Layout and BICC-2 Rajajinagar ,DAS,BESCOM, Bengaluru. The details of HVAC installed at DAS ,BESCOM offices as below:

Sl.No	HP of HVAC Units at BICC-1HSR Layout	No. of units	Make/ Total HP
1	Model:MMY-MAP1604 T8P- 16 HP Toshiba make VRF HVAC UNITS	8	Make: Toshiba Total HP=170 Total No's=14
2	Model:MMY-MAP1404 T8P- 14 HP Toshiba make VRF HVAC UNITS	2	
3	Model:MMY-MAP1204 T8P- 12 HP Toshiba make VRF HVAC UNITS	2	
4	Model:MMY-MAP1004 T8P- 10 HP Toshiba make VRF HVAC UNITS	2	

Sl.No	HP of HVAC Units at BICC-2 Rajajinagar Layout	No. of units	Make/ Total HP
1	Model:MMY-MAP0804 T8P - 8 HP Toshiba make VRF HVAC UNITS	1	Make: Toshiba Total HP=148 Total No's=12No's
2	Model:MMY-MAP1004 T8P- 10 HP Toshiba make VRF HVAC UNITS	2	
3	Model:MMY-MAP1206 T8P - 12 HP Toshiba make VRF HVAC UNITS.	1	
	Model:MMY-MAP1204 T8P- 12 HP Toshiba make VRF HVAC UNITS.	5	
4	Model:MMY-MAP1604 T8P- 16 HP Toshiba make VRF HVAC UNITS	3	

Sd/-
General Manager (Ele.,)
DAS,SG & TIC,Section, BESCOM